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10/680,801	10/07/2003	William H. Simendinger III	9248-4	4800

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EXAMINER	
FEELY, MICHAEL J	

ART UNIT	PAPER NUMBER
1712	

DATE MAILED: 07/15/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	**Application No.** 10/680,801	**Applicant(s)** SIMENDINGER ET AL.	
	Examiner Michael J. Feely	**Art Unit** 1712	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on _07 October 2003_.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) _1-27_ is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) _1-27_ is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _0304_.

4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 7, 9, and 24 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 7 and 24 limit the "alkoxy-functionalized siloxane" with a list of materials including "tetramethoxysilane" and "tetraethoxysilane". These silanes are not "alkoxy-functionalized siloxanes".

Claim 9 recites the limitation "the additive" in the composition of claim 7. There is insufficient antecedent basis for this limitation in the claim. It appears that this claim should be dependent from claim 8.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

> (e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

4. Claims 1-27 are rejected under 35 U.S.C. 102(a) as being anticipated by Simendinger et al. (WO 02/059210).

Regarding claims 1-10, Simendinger et al. disclose: *(1)* an anti-corrosion composition comprising: **(a)** a glass matrix formed by crosslinking a mixture of an amine-functionalized silane and an alkoxy-functionalized siloxane (Example 3: page 7, lines 35-47); **(b)** an epoxy (Example 3: page 7, lines 35-47); and **(c)** a compatabilizing agent for coupling the epoxy and the alkoxy-functionalized siloxane of the glass matrix (Example 3: page 7, lines 35-47);

(2) wherein the anti-corrosion composition further comprises a curing agent (Example 3: page 7, lines 35-47); *(5)* wherein the curing agent is an amine (Example 3: page 7, lines 35-47);

(3) wherein the compatabilizing agent is 3-(glycidoxypropyl)trimethoxysilane (Example 3: page 7, lines 35-47);

(4) wherein the epoxy is bi-functional (Example 3: page 7, lines 35-47); *(6)* wherein the anti-corrosion composition further includes an amino-silane compatible with the amine curing agent (Example 3: page 7, lines 35-47);

(7) wherein the alkoxy-functionalized siloxane is selected from the group consisting of polydiethoxysiloxane and polydimethoxysiloxane (Example 3: page 7, lines 35-47);

(8) wherein the composition further comprises an additive (Example 3: page 7, lines 35-47); *(9)* wherein the additive is selected from the group consisting if *see claim for list* (Example 3: page 7, lines 35-47); and

(10) wherein the glass matrix is crosslinked using an organotitanate or tin catalyst (Example 3: page 7, lines 35-47).

Regarding claims 11-16, Simendinger et al. disclose: *(11)* a method of treating a substrate to prevent corrosion, the method comprising **(a)** applying to the substrate a composition comprising a glass matrix formed by crosslinking a mixture of an amine-functionalized silane and an alkoxy-functionalized siloxane, an epoxy, and a compatabilizing agent for coupling the epoxy and the alkoxy-functionalized siloxane of the glass matrix (Example 3: page 7, lines 35-47); and **(b)** crosslinking the composition to provide an epoxy-modified network of glass and epoxy (Abstract; Example 3: page 7, lines 35-47);

(12) wherein the compatabilizing agent is 3-(glycidoxypropyl)trimethoxysilane (Example 3: page 7, lines 35-47);

(13) wherein the anti-corrosion composition further includes an amino-silane compatible with the amine curing agent (Example 3: page 7, lines 35-47);

(14) wherein the composition further comprises an additive (Example 3: page 7, lines 35-47);

(15) wherein the additive is selected from the group consisting if *see claim for list* (Example 3: page 7, lines 35-47); and

(16) wherein the glass matrix is crosslinked using an organotitanate or tin catalyst (Example 3: page 7, lines 35-47).

Regarding claims 17-27, Simendinger et al. disclose: *(17)* a substrate having applied thereto an anti-corrosion composition comprising a glass matrix formed by crosslinking a mixture of an amine-functionalized silane and an alkoxy-functionalized siloxane, an epoxy, and a compatabilizing agent for coupling the epoxy and the alkoxy-functionalized siloxane of the glass matrix (Example 3: page 7, lines 35-47);

(18) wherein the substrate is a metal (Example 3: page 7, lines 35-47; page 8);

(19) wherein the anti-corrosion composition further comprises a curing agent (Example 3: page 7, lines 35-47); *(22)* wherein the curing agent is an amine (Example 3: page 7, lines 35-47);

(20) wherein the compatabilizing agent is 3-(glycidoxypropyl)trimethoxysilane (Example 3: page 7, lines 35-47);

(21) wherein the epoxy is bi-functional (Example 3: page 7, lines 35-47);

(23) wherein the anti-corrosion composition further includes an amino-silane compatible with the amine curing agent (Example 3: page 7, lines 35-47);

(24) wherein the alkoxy-functionalized siloxane is selected from the group consisting of polydiethoxysiloxane and polydimethoxysiloxane (Example 3: page 7, lines 35-47);

(25) wherein the composition further comprises an additive (Example 3: page 7, lines 35-47); *(26)* wherein the additive is selected from the group consisting if *see claim for list* (Example 3: page 7, lines 35-47); and

(27) wherein the glass matrix is crosslinked using an organotitanate or tin catalyst (Example 3: page 7, lines 35-47).

5. Claims 1-8, 11-14, 17, and 19-25 are rejected under 35 U.S.C. 102(b) as being anticipated by Toshiya et al. (JP 62-277475).

Regarding claims 1-8, Toshiya et al. disclose: *(1)* an anti-corrosion composition comprising: **(a)** a glass matrix formed by crosslinking a mixture of an amine-functionalized silane and an alkoxy-functionalized siloxane (Abstract); **(b)** an epoxy (Abstract); and **(c)** a compatabilizing agent for coupling the epoxy and the alkoxy-functionalized siloxane of the glass matrix (Abstract);

(2) wherein the anti-corrosion composition further comprises a curing agent (Abstract); *(5)* wherein the curing agent is an amine (Abstract);

(3) wherein the compatabilizing agent is 3-(glycidoxypropyl)trimethoxysilane (Abstract);

(4) wherein the epoxy is bi-functional (Abstract); *(6)* wherein the anti-corrosion composition further includes an amino-silane compatible with the amine-curing agent (Abstract);

(7) wherein the alkoxy-functionalized siloxane is selected from the group consisting of polydiethoxysiloxane and polydimethoxysiloxane (Abstract); and

(8) wherein the composition further comprises an additive (Abstract).

Regarding claims 11-14, Toshiya et al. disclose: ***(11)*** a method of treating a substrate to prevent corrosion, the method comprising **(a)** applying to the substrate a composition comprising a glass matrix formed by crosslinking a mixture of an amine-functionalized silane and an alkoxy-functionalized siloxane, an epoxy, and a compatabilizing agent for coupling the epoxy and the alkoxy-functionalized siloxane of the glass matrix (Abstract); and **(b)** crosslinking the composition to provide an epoxy-modified network of glass and epoxy (Abstract);

(12) wherein the compatabilizing agent is 3-(glycidoxypropyl)trimethoxysilane (Abstract);

(13) wherein the anti-corrosion composition further includes an amino-silane compatible with the amine curing agent (Abstract); and

(14) wherein the composition further comprises an additive (Abstract).

Regarding claims 17 and 19-25, Toshiya et al. disclose: ***(17)*** a substrate having applied thereto an anti-corrosion composition comprising a glass matrix formed by crosslinking a mixture of an amine-functionalized silane and an alkoxy-functionalized siloxane, an epoxy, and a compatabilizing agent for coupling the epoxy and the alkoxy-functionalized siloxane of the glass matrix (Abstract);

(19) wherein the anti-corrosion composition further comprises a curing agent (Abstract);
(22) wherein the curing agent is an amine (Abstract);

(20) wherein the compatabilizing agent is 3-(glycidoxypropyl)trimethoxysilane (Abstract);

(21) wherein the epoxy is bi-functional (Abstract);

(23) wherein the anti-corrosion composition further includes an amino-silane compatible with the amine-curing agent (Abstract);

(24) wherein the alkoxy-functionalized siloxane is selected from the group consisting of polydiethoxysiloxane and polydimethoxysiloxane (Abstract);

(25) wherein the composition further comprises an additive (Abstract).

6. Claims 1-27 rejected under 35 U.S.C. 102(e) as being anticipated by Simendinger et al. (US Pat. No. 6,702,953)

The applied reference has a common assignee with the instant application; however, the inventive entity is different. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention "by another," or by an appropriate showing under 37 CFR 1.131.

Regarding claims 1-10, Simendinger et al. disclose: *(1)* an anti-corrosion composition comprising: **(a)** a glass matrix formed by crosslinking a mixture of an amine-functionalized silane and an alkoxy-functionalized siloxane (Example 3: column 5, lines 22-60); **(b)** an epoxy (Example 3: column 5, lines 22-60); and **(c)** a compatabilizing agent for coupling the epoxy and the alkoxy-functionalized siloxane of the glass matrix (Example 3: column 5, lines 22-60);

(2) wherein the anti-corrosion composition further comprises a curing agent (Example 3: column 5, lines 22-60); *(5)* wherein the curing agent is an amine (Example 3: column 5, lines 22-60);

(3) wherein the compatabilizing agent is 3-(glycidoxypropyl)trimethoxysilane (Example 3: column 5, lines 22-60);

(4) wherein the epoxy is bi-functional (Example 3: column 5, lines 22-60); *(6)* wherein the anti-corrosion composition further includes an amino-silane compatible with the amine curing agent (Example 3: column 5, lines 22-60);

(7) wherein the alkoxy-functionalized siloxane is selected from the group consisting of polydiethoxysiloxane and polydimethoxysiloxane (Example 3: column 5, lines 22-60);

(8) wherein the composition further comprises an additive (Example 3: column 5, lines 22-60); *(9)* wherein the additive is selected from the group consisting if *see claim for list* (Example 3: column 5, lines 22-60); and

(10) wherein the glass matrix is crosslinked using an organotitanate or tin catalyst (Example 3: column 5, lines 22-60).

Regarding claims 11-16, Simendinger et al. disclose: *(11)* a method of treating a substrate to prevent corrosion, the method comprising **(a)** applying to the substrate a composition comprising a glass matrix formed by crosslinking a mixture of an amine-functionalized silane and an alkoxy-functionalized siloxane, an epoxy, and a compatabilizing agent for coupling the epoxy and the alkoxy-functionalized siloxane of the glass matrix (Example 3: column 5, lines 22-60); and **(b)** crosslinking the composition to provide an epoxy-modified network of glass and epoxy (Example 3: column 5, lines 22-60);

(12) wherein the compatabilizing agent is 3-(glycidoxypropyl)trimethoxysilane (Example 3: column 5, lines 22-60);

(13) wherein the anti-corrosion composition further includes an amino-silane compatible with the amine curing agent (Example 3: column 5, lines 22-60);

(14) wherein the composition further comprises an additive (Example 3: column 5, lines 22-60);

(15) wherein the additive is selected from the group consisting if *see claim for list* (Example 3: column 5, lines 22-60); and

(16) wherein the glass matrix is crosslinked using an organotitanate or tin catalyst (Example 3: column 5, lines 22-60).

Regarding claims 17-27, Simendinger et al. disclose: *(17)* a substrate having applied thereto an anti-corrosion composition comprising a glass matrix formed by crosslinking a mixture of an amine-functionalized silane and an alkoxy-functionalized siloxane, an epoxy, and a compatabilizing agent for coupling the epoxy and the alkoxy-functionalized siloxane of the glass matrix (Example 3: column 5, lines 22-60);

(18) wherein the substrate is a metal (Example 3: column 5, lines 22-60);

(19) wherein the anti-corrosion composition further comprises a curing agent (Example 3: column 5, lines 22-60); *(22)* wherein the curing agent is an amine (Example 3: column 5, lines 22-60);

(20) wherein the compatabilizing agent is 3-(glycidoxypropyl)trimethoxysilane (Example 3: column 5, lines 22-60);

(21) wherein the epoxy is bi-functional (Example 3: column 5, lines 22-60);

(23) wherein the anti-corrosion composition further includes an amino-silane compatible with the amine curing agent (Example 3: column 5, lines 22-60);

(24) wherein the alkoxy-functionalized siloxane is selected from the group consisting of polydiethoxysiloxane and polydimethoxysiloxane (Example 3: column 5, lines 22-60);

(25) wherein the composition further comprises an additive (Example 3: column 5, lines 22-60); *(26)* wherein the additive is selected from the group consisting if *see claim for list* (Example 3: column 5, lines 22-60); and

(27) wherein the glass matrix is crosslinked using an organotitanate or tin catalyst (Example 3: column 5, lines 22-60).

Communication

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael J. Feely whose telephone number is 571-272-1086. The examiner can normally be reached on M-F 8:30 to 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Randy Gulakowski can be reached on 571-272-1302. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Michael J. Feely
Primary Examiner
Art Unit 1712

July 10, 2005